



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

MEMORANDUM

DATE: October 5, 2016

SUBJECT: Request for a Time-Critical Removal Action at the Spirit of Sacramento Removal Site, Sausalito, Marin County, California

FROM: Chris Reiner, On-Scene Coordinator
Emergency Response Section (SFD-9-2)

THROUGH: Harry L. Allen, Chief
Emergency Response Section (SFD-9-2)

TO: Enrique Manzanilla, Director
Superfund Division (SFD-9)

I. PURPOSE

The purpose of this memorandum is to request and document approval to spend up to \$306,000 in direct extramural costs to mitigate threats to human health and the environment posed by the presence of hazardous substances at the Spirit of Sacramento Removal Site (the "Site"). The Site is located at the US Army Corps of Engineers (USACE) Facility in Sausalito, CA and consists of an 87-foot vessel, called the Spirit of Sacramento, which had previously sunk in the Sacramento Delta. The vessel was raised by the US Coast Guard (USCG) and towed to its current location.

This memorandum will serve as approval for the expenditure required for EPA to take actions described herein to abate an imminent and substantial endangerment to San Francisco Bay and surrounding community from actual and threatened releases of hazardous substances contained within the vessel. EPA initiated work under this response action using the OSC's delegated procurement authority. This action memo will also serve to document and approve of that initial response action.

Due to the range of hazards present on the vessel, this action will be a collaborative effort between the Army Corps of Engineers, USCG, EPA, and the Contra Costa County Sheriff's Department, in whose jurisdiction the vessel sank. As described above, the Spirit of Sacramento was raised from the water by the US Coast Guard, who towed it to the USACE facility in Sausalito in order to remove the fuel on board. USACE will provide a work area for EPA, who will remove the hazardous substances from the vessel. When the hazardous substance removal is complete,

Contra Costa County will move the vessel to a separate facility and arrange for it to be dismantled and scrapped. More information on this arrangement is provided below. EPA's proposed removal of hazardous substances would be undertaken pursuant to Section 104(a)(1) of the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA"), 42 U.S.C. § 9604(a)(1), and Section 300.415 of the National Oil and Hazardous Substances Pollution Contingency Plan ("NCP"), 40 CFR § 300.415.

II. SITE CONDITIONS AND BACKGROUND

Site Status: Non-NPL
Category of Removal: Time-Critical
CERCLIS ID: TBD
SITE ID: A9AX

A. Site Description

1. Physical Location

The Site is located at the US Army Corps of Engineers facility at 2100 Bridgeway in Sausalito, Marin County, California. The Spirit of Sacramento originally sank near Bethel Island, California, in the Sacramento Delta. In order to avoid conducting operations related to oil and hazardous substance removal on open water and in the fragile environment of the delta, USCG had the vessel raised and towed to the USACE facility.

Latitude: 37.865457 N
Longitude: 122.495191 W

2. Site Characteristics

Just after midnight on September 4, 2016, Coast Guard Sector San Francisco received notification that the Spirit of Sacramento was taking on water from the stern and that the engine room was actively flooding. The 87-foot vessel, constructed in 1965, was in the vicinity of Franks Track near Bethel Island. Coast Guard Station Rio Vista responded and ensured the two persons on board made it safely ashore. Six hundred gallons of diesel fuel was reported on board, although no sheen or active discharge was observed. The vessel was reported to be partially submerged and anchored but was not deemed to be a hazard to navigation. USCG was unable to speak to the owner and issued a Notice of Federal Interest (NOFI) via voice mail. By the following morning, the vessel had capsized and was upside down in the water; and a small sheen was observed. The vessel owner was still unreachable. Due to the proximity of sensitive sites, the pollution potential and complexity of the response, the Spirit of Sacramento was determined to be a significant risk to the environment, and the USCG accessed the Oil Spill Liability Trust Fund (OSLTF) to fund response operations. Global Diving and

Salvage Inc. (Global) was hired to deploy boom and conduct pollution mitigation operations. Based on the position and condition of the vessel, USCG determined that the safest approach, in terms of responder safety and minimizing the risk of a release of fuel to the environment, was to move the vessel somewhere for it to be docked and fuel removed from it. USACE offered their Sausalito facility for this work to be completed. EPA and USCG looked for alternative sites, trying to find a location that was close by and not in an environmentally sensitive area, but no such site could be located in the short time available, and the agencies accepted the USACE offer.

After an extensive planning process, USCG arranged for Global to bring a large marine crane to the sunken vessel's location in order to move the vessel to an upright position and lift it from the water. This work took place on September 28 and 29, 2016. On the morning of September 29, a tugboat began towing the Spirit of Sacramento to Sausalito. Due to delays related to rough seas and crew fatigue, the vessel did not arrive in Sausalito until September 30, and fuel removal operations began on October 1. This proved a challenging process, and fuel removal was completed on October 3. On October 4, USCG transitioned the lead role on the project to EPA.

The shoreline in the vicinity of the Site is highly developed and is a significant tourist destination, as well as being adjacent to sensitive sites within San Francisco Bay. A paddleboard and sea kayaking outfitter operates out of the pier adjacent to where the Spirit of Sacramento is docked, and a number of small boat harbors are located nearby, most notably the Sausalito Marina. There are many residences with private docks and over-water structures in the vicinity, as well as houseboats permanently docked nearby. A wide range of water birds are frequently seen in the area, including pelicans, egrets, herons, ducks and terns, as well as seals, dolphins and other marine species.

The Spirit of Sacramento sat untended for several years prior to its sinking, and it was not well maintained. Spending a month under water has caused its condition to further deteriorate. If not addressed, its hull and superstructure will continue to deteriorate, creating a substantial threat of a release of a hazardous substance into the environment, potentially impacting nearby people, property and wildlife.

3. Removal site evaluation

On September 29 and 30, 2016, EPA, USCG and Global conducted a preliminary visual assessment of hazardous substances on board the Spirit of Sacramento. This assessment identified: compressed gases, in the form of cylinders and built-in fire-fighting system; paint and varnishes, stored in a supply locker; marine batteries, likely to contain heavy metals and corrosives; and a large engine block surrounded with what is suspected to be asbestos insulation. This engine block and other vessel components also likely contains fluids that are hazardous substances, such as engine oil or hydraulic oil.

After signature of this Action Memorandum, and as one of the initial steps of this removal action, EPA will conduct a more thorough assessment of hazardous substances on the vessel, including a detailed inventory and sampling to determine if asbestos or other hazards are present. Potential hazards to be identified through sampling include asbestos, polychlorinated biphenyls (PCBs), and metals.

4. Release or threatened release into the environment of a hazardous substance, or pollutant or contaminant

Based on EPA's September 2016 preliminary assessment, threatened releases of hazardous substances pose a risk to human health and the environment at this Site. Analytical results are expected to confirm that there is a potential for hazardous substances (compressed gases, paints, asbestos, PCBs, metals) to be released into the environment from the vessel.

Exposure to these hazardous substances may result in toxic endpoints to life and may (in the case of PCBs) biomagnify in food webs, potentially being consumed by humans. Additionally, the potential is great that other hazardous materials are present that have not yet been located or identified. Releases of these substances into the aquatic environment are subject to dispersion and translocation via tidal action and ecosystem processes and therefore may be harmful or lethal to nearby marine species.

5. NPL status

The Spirit of Sacramento Removal Site is not on the National Priorities List (NPL).

B. Other Actions to Date

As described above, USCG righted and raised the vessel, towed it to its current location, and removed fuel from the fuel tank. No previous EPA actions have taken place on the Site.

C. State and Local Authorities' Roles

1. State and local actions to date

The Contra Costa County Sheriff's Department has provided site security and assistance with water operations throughout the response to date, from initial discovery of the vessel to completion of the operation to right and raise the vessel. Contra Costa County requested EPA's assistance with this project in a meeting on September 21, 2016 and provided a signed State Request Letter on October 6, 2016. In addition, a decision memo, describing the role of each of the agencies involved, was negotiated and signed by Contra Costa County, USCG, USACE, EPA and the Office of Spill Prevention and Response of the California Department of Fish and Wildlife.

2. Potential for continued state and local response

Contra Costa County has secured funding and a contract with a salvage firm to tow the Spirit of Sacramento to Mare Island for disassembly and disposal. The County is not prepared to address hazardous substances on board, but by covering the costs of dismantling the vessel and arranging for recycling or disposal of its component parts, they will be contributing significantly towards the overall completion of this project.

III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

Current Site conditions pose the threat of release of hazardous substances to the portion of San Francisco Bay adjacent to the USACE facility as well as surrounding sensitive ecosystems. The likelihood of direct human exposure, via ingestion and/or inhalation of hazardous substances, and the threat of future releases and migration of those substances, pose an imminent and substantial endangerment to public health or welfare or the environment based on the factors set forth in the NCP, 40 CFR § 300.415(b)(2). These factors include:

1. Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants

This factor is present at the Site due to the suspected presence of asbestos, PCBs, and heavy metals in materials on the vessel. The potential exists for contaminated material to impact humans, animals, and marine life either by direct contact or ingestion at the source or through tidal event migration and particulate migration/inhalation. Persons fishing or otherwise recreating in proximity to the Spirit of Sacramento may be exposed to windborne asbestos and/or heavy metals in dust. Persons trespassing on the vessel, which has been identified as an area of concern by the Sausalito Police Department, could be exposed to these substances as well as come in contact with PCB oils, marine batteries or other hazardous materials yet to be identified. Animals, such as the many water birds in the area, that come in contact with the vessel would likely be directly exposed to these hazardous substances as well as oil wastes.

Asbestos is the name given to a group of six different fibrous minerals (amosite, chrysotile, crocidolite, and the fibrous varieties tremolite, actinolite, and anthophyllite). Asbestos fibers may be released into the air by the disturbances of asbestos-containing material. Asbestos mainly affects the lungs and the membrane that surrounds the lungs. Breathing high levels of asbestos for a long time may result in scar-like tissue in the lungs and in pleural membrane (lining) that surrounds the lung. This is a serious disease called asbestosis that can eventually lead to disability and death.

PCBs are chlorinated oils that are extremely persistent in the environment and are resistant to chemical and biological degradation. PCBs bioaccumulate in fatty

tissues and are known to increase in concentration up the food chain. Acute exposure of large amounts of PCBs can cause harmful effects to the eyes, liver, and reproductive system. Chronic exposure can cause harmful effects to the skin, eyes, liver, and reproductive system; PCBs are carcinogens and have been shown to cause tumors of the pituitary gland and liver as well as leukemia.

Heavy metals, such as lead, may well be present in paints or other materials on the vessel. Lead is a heavy metal that bio-accumulates in human tissues. Short-term exposure to large amounts of lead can cause harmful effects on the nervous system, gastrointestinal system, kidneys, and circulatory system. Long-term exposure to low levels, such as those that occur in the work place, can cause damage to the central nervous system, kidneys, blood, gastrointestinal tract, and gingival tissues.

Other hazardous substances or pollutants and contaminants not discovered to date or not specifically identified herein may exist at the Site. These substances may also pose a threat to human health and the environment.

2. Actual or potential contamination of drinking water supplies or sensitive ecosystems

Sausalito Bay forms part of the San Francisco Bay ecosystem which sustains an abundant population of striped bass, sturgeon, leopard sharks, starry flounder, and other species, some of which are popular with local anglers. Nearby marshes and wetlands are sensitive ecosystems that are threatened by the actual or potential release of hazardous substances into the aquatic environment from the Spirit of Sacramento.

3. Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers, that may pose a threat of release

EPA's visual assessment documented the existence of various size containers of hazardous substances on board the vessel, and it is likely that more such containers will be found. Among other items identified, compressed gas cylinders used during vessel operations pose a threat of release of their contents to the environment.

4. Weather conditions that may cause hazardous substances to migrate or be released

The Spirit of Sacramento is an old vessel in poor condition. It is currently docked in Sausalito, and exposed to potential weather events impacting San Francisco Bay. Given that the vessel has already sunk once, it is possible that a significant storm event could further damage it, causing it to sink again and release hazardous substances to the environment. The approach of the rainy season in the Bay Area, and the resulting greater likelihood of severe weather events, make it important to address hazardous substances on the vessel in a timely fashion.

5. Availability of other appropriate federal or state response mechanisms to respond to the release

As described previously, this removal action is a collaborative project involving USCG, USACE, EPA and Contra Costa County. Many aspects of the potential for release from the Spirit of Sacramento are being addressed by other agencies involved, and EPA's efforts will be limited to removal of hazardous substances on board.

IV. ENDANGERMENT DETERMINATION

Actual and threatened releases of hazardous substances from the Spirit of Sacramento Removal Site, if not addressed by implementing a Time-Critical Removal Action, may continue to present an imminent and substantial endangerment to the public health or welfare or the environment.

V. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Proposed Actions

1. Proposed action description

EPA proposes to mitigate the imminent and substantial threats to human health, welfare, or the environment by taking these steps to prevent the release of hazardous substances:

- Conduct a detailed assessment of hazardous substances on board the vessel, including sampling of materials to determine if they are hazardous substances.
- Remove all hazardous substances from the vessel Spirit of Sacramento.
- Transport and dispose of all hazardous wastes at approved facilities.
- Transition leadership on the project to the Contra Costa County Sheriff's Department

2. Contribution to remedial performance

This removal action would complete all clean-up activities at the Spirit of Sacramento Removal Site.

The long-term cleanup plan for the site:

It is expected that this removal action will eliminate any threat of direct or indirect releases of hazardous substances from the Site to the San Francisco Bay and Pacific Ocean.

Threats that will require attention prior to the start of a long-term cleanup:

The removal actions described above will constitute a permanent remedy for the Site.

3. Applicable or relevant and appropriate requirements (ARARs)

Section 300.415(j) of the NCP provides that removal actions must attain ARARs to the extent practicable, considering the exigencies of the situation.

Section 300.5 of the NCP defines applicable requirements as cleanup standards, standards of control, and other substantive environmental protection requirements, criteria or limitations promulgated under Federal environmental or State environmental or facility siting laws that specifically address a hazardous substance, pollutant, contaminant, remedial action, location or other circumstances at a CERCLA site.

Section 300.5 of the NCP defines relevant and appropriate requirements as cleanup standards, standards of control and other substantive requirements, criteria, or limitations promulgated under Federal environmental or State environmental or facility siting laws that, while not “applicable” to a hazardous substance, pollutant, or contaminant, remedial action, location, or other circumstances at a CERCLA site, address problems or situations sufficiently similar to those encountered at the CERCLA site and are well-suited to the particular site.

Because CERCLA on-site response actions do not require permitting, only substantive requirements are considered as possible ARARs. Administrative requirements such as approval of, or consultation with administrative bodies, issuance of permits, documentation, reporting, record keeping and enforcement are not ARARs for the CERCLA actions confined to the site.

Federal ARARs determined to be practicable for the Site are:

- The RCRA Land Disposal Restrictions (LDRs) 40 CFR 268.40 Subpart D implemented through Title 22 Section 66268.40.
- Toxic Substances Control Act (TSCA) disposal requirements for PCB-contaminated waste, 40 CFR § 761.60
- Substantive provisions of Section 7 of the Endangered Species Act, 16 U.S.C. § 1531 et seq.

No Permits Required for On-Site Activities:

CERCLA Section 121(e), 42 U.S.C. § 9621(e), provides that no federal, state, or local permit shall be required for the portion of any removal or remedial action conducted entirely onsite, where such remedial action is selected and carried out in compliance with this Section. The NCP at 40 CFR § 300.400(e) further states that no

federal, state, or local permits are required for on-site response actions conducted pursuant to CERCLA Sections 104, 106, 120, 121, or 122. The term *on-site* means the areal extent of contamination and all suitable areas in very close proximity to the contamination necessary for implementation of the response action. Permits, if required, shall be obtained for all response activities conducted off-site.

Although these are not ARARs, because by definition they involve off-site activities, EPA will also comply with the U.S. Department of Transportation of Hazardous Materials Regulations, 49 CFR Part 171, 172 and 173, as well as the Off-Site Rule, CERCLA Section 121(d)(3) and 40 CFR § 300.440.

4. Project schedule

It is estimated that removal activities will take approximately 2-3 weeks to complete.

B. Estimated Costs

Regional Removal Allowance Costs

Cleanup Contractor	\$ 200,000
USCG PST	\$ 5,000
START Contractor	\$ 50,000
Extramural Subtotal	<u>\$ 255,000</u>
Extramural Contingency (~20%)	\$ 51,000
TOTAL, Removal Action Project Ceiling	\$ 306,000

VII. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

Given the Site conditions, the nature of the hazardous substances documented on-site, and the potential exposure pathways to nearby populations and sensitive ecosystems described in Sections III and IV above, actual or threatened releases of hazardous substances from the Site, if not addressed by implementing the response actions selected in this Action Memorandum, may present an imminent and substantial endangerment to the public health or welfare or the environment.

VIII. OUTSTANDING POLICY ISSUES

There are no outstanding policy issues with the Site identified at this time.

IX. ENFORCEMENT

Please see the attached Confidential Enforcement Addendum for a discussion regarding potentially responsible parties ("PRPs"). The following intramural costs are also recoverable:

Intramural Costs¹

U.S. EPA Direct Costs	\$ 40,000
U.S. EPA Indirect Costs (56.51% of spending \$306,000 + \$40,000)	<u>\$ 195,524</u>
TOTAL Intramural Costs	\$ 235,524

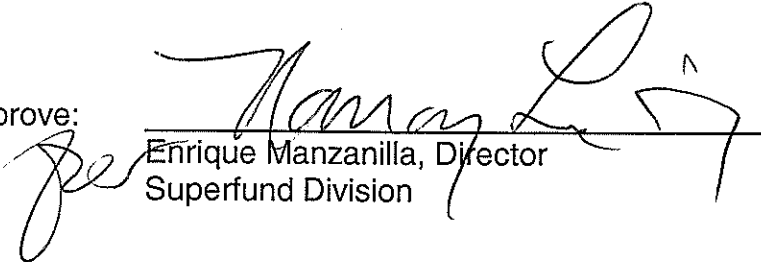
The total EPA extramural and intramural costs for this removal action, based on full-cost accounting practices that will be eligible for cost recovery are estimated to be \$541,524.

X. U.S. EPA RECOMMENDATION

This decision document represents the selected removal action for the Spirit of Sacramento Removal Site, Marin County, California, developed in accordance with CERCLA and not inconsistent with the NCP. This decision is based on the Administrative Record for the Site.

Because conditions at the Site meet the NCP criteria for a Time-Critical Removal Action, EPA staff recommends the approval of the removal action proposed in this Action Memorandum. The total project ceiling if approved will be \$541,524, of which an estimated \$306,000 comes from the Regional Removal Allowance. Approval may be indicated by signature on the following page.

¹ Direct costs include direct extramural costs and direct intramural costs. Indirect costs are calculated based on an estimated indirect cost rate expressed as a percentage of site-specific direct costs, consistent with the full cost accounting methodology effective October 2, 2000. These estimates do not include pre-judgment interest, do not take into account other enforcement costs, including Department of Justice costs, and may be adjusted during the course of a removal action. The estimates are for illustrative purposes only and their use is not intended to create any rights for responsible parties. Neither the lack of a total cost estimate nor deviation of actual costs from this estimate will affect the United States' right to cost recovery.

Approve: 
Enrique Manzanilla, Director
Superfund Division

10/13/16
Date

Disapprove: _____
Enrique Manzanilla, Director
Superfund Division

Date

Attachments:

1. Confidential Enforcement Addendum
2. State Request Letter dated October 6, 2016
3. Decision Memo, Spirit of Sacramento
4. Index to the Administrative Record

cc: Jean Schumman, U.S. EPA, OEM, HQ

bcc: Harry Allen, SFD-9-2
Chris Reiner, SFD-9-2
Desean Garnett, ORC-3
Celeste Temple, SFD-9-4
Site File

**Spirit of Sacramento Removal Site
Index to Administrative Record**

1. Vessel schematics and history, provided by US Coast Guard
2. Contra Costa County Office of the Sheriff's, Notice of Abandonment, September 13, 2016

REQUEST FOR FEDERAL ACTION

The Contra Costa County Sheriff's Office ("Requesting Agency") requests assistance from the United States Environmental Protection Agency, Region 9 ("EPA") to conduct a removal action at the facility located at:

Spirit of Sacramento
2100 Bridgeway
Marin County
Sausalito, CA

By making this Request, the Requesting Agency recognizes that with respect to this removal action EPA, or any other federal agency acting in conjunction with or on behalf of EPA, may use its authority under the Comprehensive Environmental Response Compensation and Liability Act ("CERCLA"), 42 U.S.C.A. §§ 9601, et seq., the National Contingency Plan ("NCP"), 40 C.F.R. Part 300, or any other federal statute, regulation or response program, to respond to and recover costs incurred in response to releases or threats of releases of pollutants and contaminants as deemed necessary in EPA's sole discretion to abate an imminent and substantial endangerment to public health or welfare or the environment at the location stated above. By making this Request, the Requesting Agency acknowledges that notice pursuant to Section 128(b)(1)(D) of CERCLA, 42 U.S.C. § 9628(b)(1)(D), is not applicable with respect to this removal action. The signatory of this request is authorized to make this request on behalf of the State.

Executed on this the 6 day of October, 2016.

E. Wanner
Name

ASSISTANT SHERIFF
Title

